

### REMARKS

Favorable reconsideration is respectfully requested in light of the above amendments and the following comments. Claim 45 has been amended to require that the polyurethane polymer is endcapped with an antimicrobial quaternary ammonium group. New claim 57 has been added to round out the potential scope of protection. No new matter has been added, as the specification clearly describes polyurethane polymers having pendent antimicrobial quaternary ammonium groups.

#### § 102/103 Rejection

Claims 45, 49-56 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Haase et al., U.S. Patent No. 4,647,476. Favorable reconsideration is respectfully requested.

The claimed invention requires that the polyurethane polymer be endcapped with an antimicrobial quaternary ammonium group. Haase et al., in contrast, disclose polymers in which quaternary ammonium groups are in the backbone. Thus, Haase et al. do not disclose a polyurethane polymer having a terminal quaternary ammonium group. Moreover, Haase et al. do not provide any suggestion or motivation to modify their polymer to provide a terminal quaternary ammonium group. Haase et al. fail to describe or suggest the claimed invention.

Further, with respect to new claim 57, as Haase et al. place quaternary ammonium groups only in the backbone, the reference cannot be considered as describing or suggesting a polyurethane polymer having pendent antimicrobial quaternary ammonium groups. Favorable reconsideration is respectfully requested.

#### § 103 Rejection

Claims 45 and 49-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gould et al., U.S. Patent No. 4,451,635, in view of Green et al., U.S. Patent No. 3,931,319, and Vandergaard, U.S. Patent No. 4,110,286.

One of the requirements of a *prima facie* obviousness rejection is that the cited combination of references must disclose each and every claimed element. At a minimum, this requirement has not been met. As noted above, the claimed invention requires that the

polyurethane polymer be endcapped with a terminal antimicrobial quaternary ammonium group. The cited references neither describe nor suggest this.

Gould et al. appear to describe polyurethanes that may include quaternary ammonium groups. In particular, while Gould et al. appear to describe a polyurethane that may include quaternary ammonium groups, there is no actual teaching as to where the quaternary ammonium groups are. Mere speculation on the Examiner's part does not provide a teaching. Gould et al. does not teach forming a polyurethane polymer that is endcapped with a terminal antimicrobial quaternary ammonium group. This is a claimed element missing from Gould et al.

Neither secondary reference appears to remedy the noted shortcoming of Gould et al. Green et al. discloses polymers that may be endcapped with quaternary ammonium moieties, but it should be noted that Green et al. describes endcapping particular polymers that are not polyurethanes. In an unpredictable art such as polymer chemistry, it is not appropriate to arbitrarily combine elements from disparate references in order to reach the claimed invention. One of skill in the art would not consider combining the teachings of Gould et al. and Green et al. to obtain a polyurethane polymer that is endcapped with a terminal antimicrobial quaternary ammonium group.

Vandegaer et al. describes polyurethanes, but does not teach end capping a polyurethane with an antimicrobial quaternary ammonium group. Consequently, Vandegaer et al. cannot be considered as remedying the noted shortcomings of Gould et al. In fact, none of the references, taken either individually or in combination, discloses a polyurethane that is endcapped with a terminal antimicrobial quaternary ammonium group. Thus, the cited combination fails to disclose each and every claimed element. As a result, the *prima facie* obviousness rejection is flawed and should be withdrawn. Favorable reconsideration is respectfully requested.

**CONCLUSION**

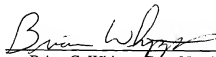
In view of the above, Applicant respectfully requests withdrawal of the rejections and allowance of the claims. Prompt passage to issue is earnestly solicited. Should the Examiner feel a telephone interview would be helpful in advancing this case to allowance, Applicant invites the Examiner to contact their representative at the number listed below.

Please continue to transmit all correspondence to:

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Respectfully Submitted,

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